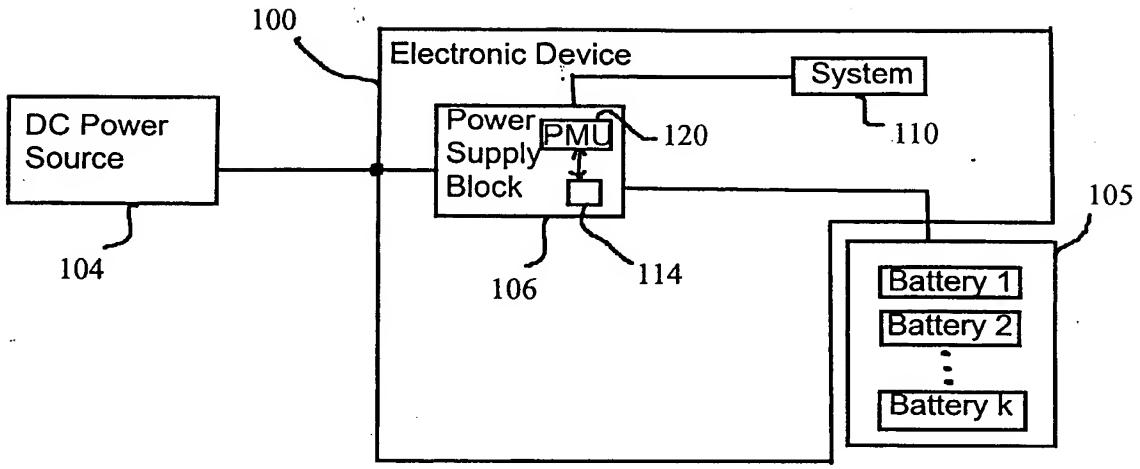

100
Electronic Device
System
110
DC Power Source
Power Supply Block
PMU
120
105
104
106
114
Battery 1
Battery 2
Battery k

FIG. 1

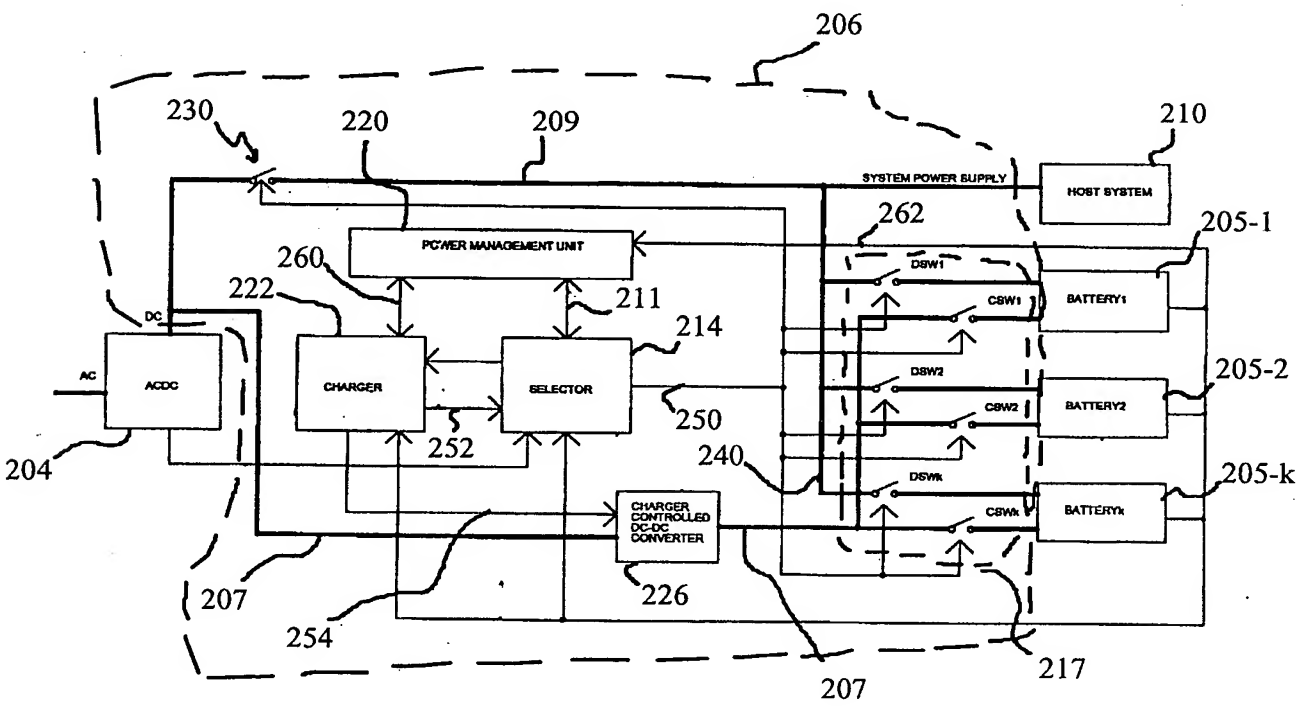

206
230
220
209
210
SYSTEM POWER SUPPLY
HOST SYSTEM
262
205-1
POWER MANAGEMENT UNIT
260
222
211
214
DSW1
CSW1
BATTERY1
DC
AC
ACDC
CHARGER
SELECTOR
DSW2
CSW2
BATTERY2
205-2
250
252
204
240
DSWk
CSWk
BATTERYk
205-k
CHARGER CONTROLLED DC-DC CONVERTER
207
226
254
207
217

FIG. 2

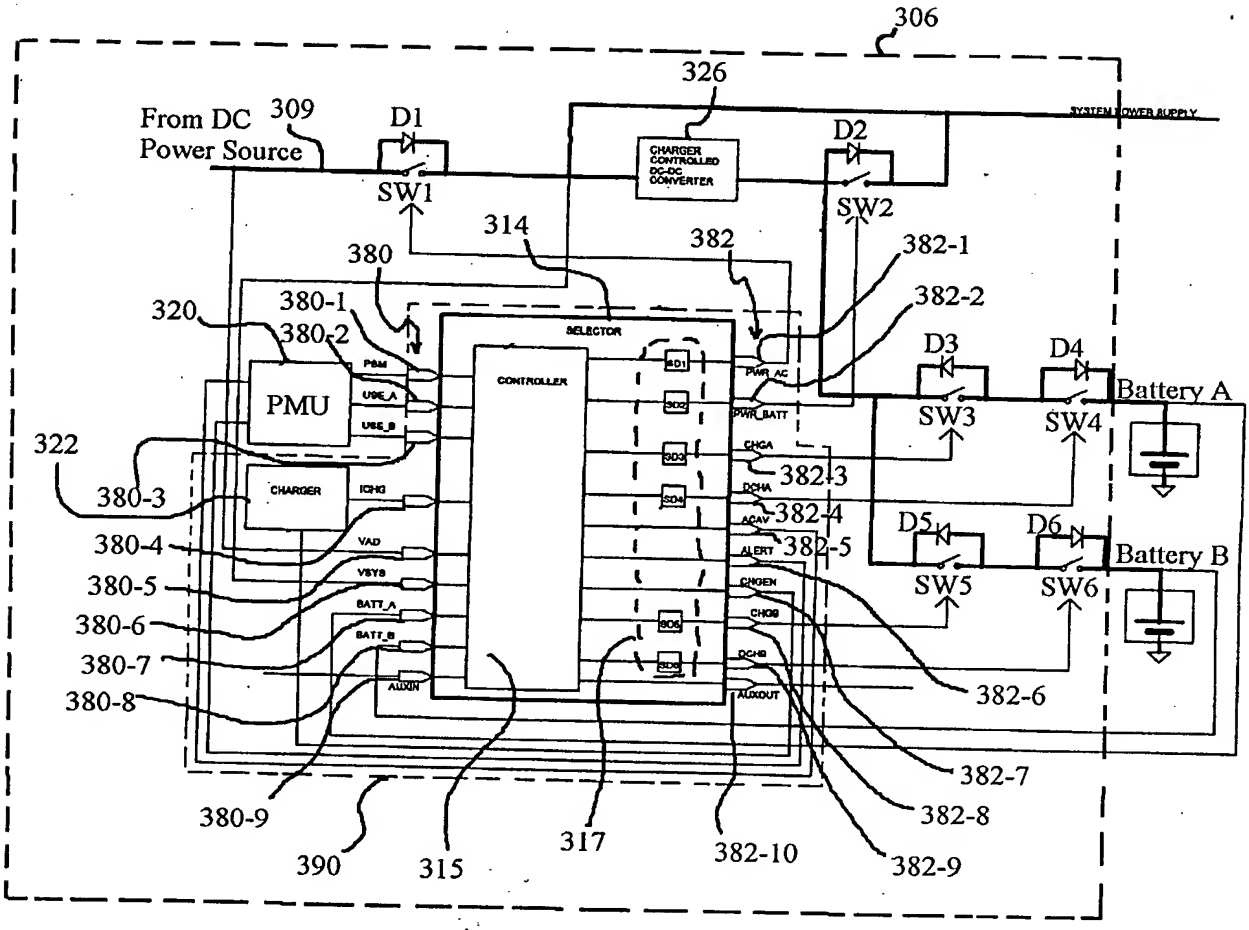

306
326
From DC
Power Source
309
D1
SW1
CHARGER CONTROLLED DC-DC CONVERTER
SYSTEM POWER SUPPLY
D2
SW2
314
380
382
382-1
382-2
320
380-1
380-2
SELECTOR
CONTROLLER
PMU
PBM
USE_A
USE_B
D3
D4
Battery A
SW3
SW4
322
380-3
CHARGER
ICHG
CHGA
382-3
DCHA
382-4
ACAV
382-5
D5
D6
Battery B
SW5
SW6
380-4
VAD
ALERT
380-5
VSYS
CHGEN
380-6
BATT_A
CHGB
382-6
380-7
BATT_B
DCHB
382-7
380-8
AUXIN
AUXOUT
382-8
380-9
382-9
390
315
317
382-10

FIG. 3

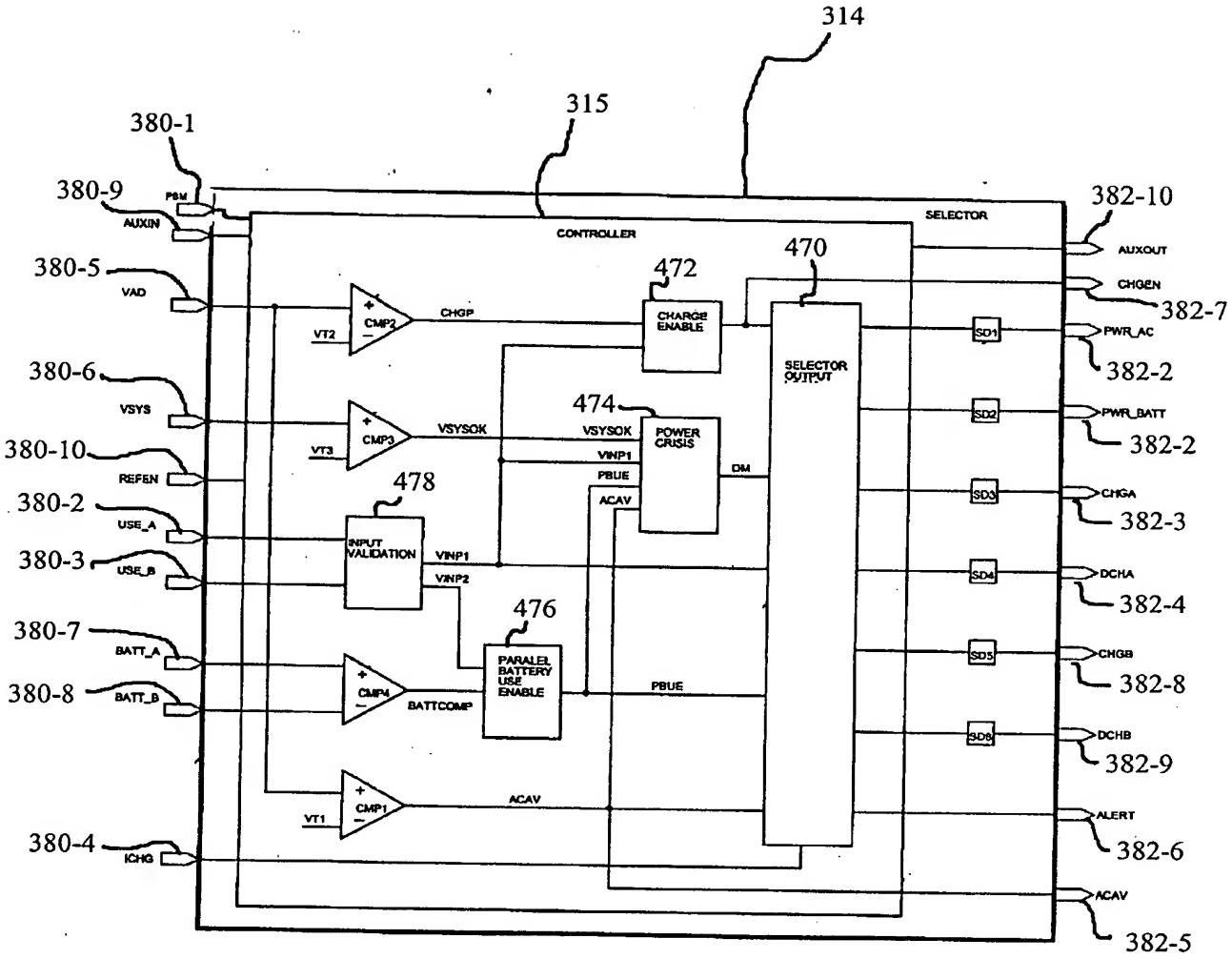
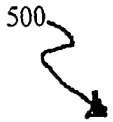

314
315
380-1
380-9
PSM
AUXIN
380-5
VAD
380-6
VSYS
380-10
REFEN
380-2
USE_A
380-3
USE_B
380-7
BATT_A
380-8
BATT_B
380-4
ICHG
CONTROLLER
SELECTOR
CMP2
CHGP
VT2
472
CHARGE ENABLE
470
SELECTOR OUTPUT
CMP3
VSYSOK
VT3
474
POWER CRISIS
VINP1
PBUE
ACAV
DM
478
INPUT VALIDATION
VINP1
VINP2
476
PARALEL BATTERY USE ENABLE
CMP4
BATTCOMP
PBUE
CMP1
ACAV
VT1
SD1
SD2
SD3
SD4
SD5
SD6
382-10
AUXOUT
CHGEN
382-7
PWR_AC
382-2
PWR_BATT
382-2
CHGA
382-3
DCHA
382-4
CHGB
382-8
DCHB
382-9
ALERT
382-6
ACAV
382-5

FIG. 4



	USE signals indicate Battery A		USE signals indicate Battery B		Use signals indicate Battery A and B in parallel						Use signals Indicate neither Battery A or B
	502	504	506	508	510	512	514	516	518	520	522
Signal States											
USE_A	low	low	high	high	low	low	low	low	low	low	high
USE_B	high	high	low	low	low	low	low	low	low	low	high
Lower voltage battery	X	X	X	X	X	X	A	A	B	B	X
Charging Current Signal	low	high	low	high	low	high	low	high	low	high	low
VINP1	high	high	high	high	high	high	high	high	high	high	low
CHGEN	high	high	high	high	high	high	high	high	high	high	low
PBUE	low	low	low	low	high	high	low	low	low	low	low
Switch States											
SW1	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
SW2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SW3	ON	ON	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF
SW4	OFF	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
SW5	OFF	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF
SW6	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	ON	OFF

FIG. 5

Supply Mode	Nbssm1	Nbssm1	Nbssm2
Targeted Supply Battery	A	B	A+B
VINP1	high	high	high
VINP2	low	low	high
BATTCOMP	X	X	high
PBUE	low	low	high
SW1	OFF	OFF	OFF
SW2	ON	ON	ON
SW3	ON	OFF	ON
SW4	ON	OFF	ON
SW5	OFF	ON	ON
SW6	OFF	ON	ON

FIG. 6

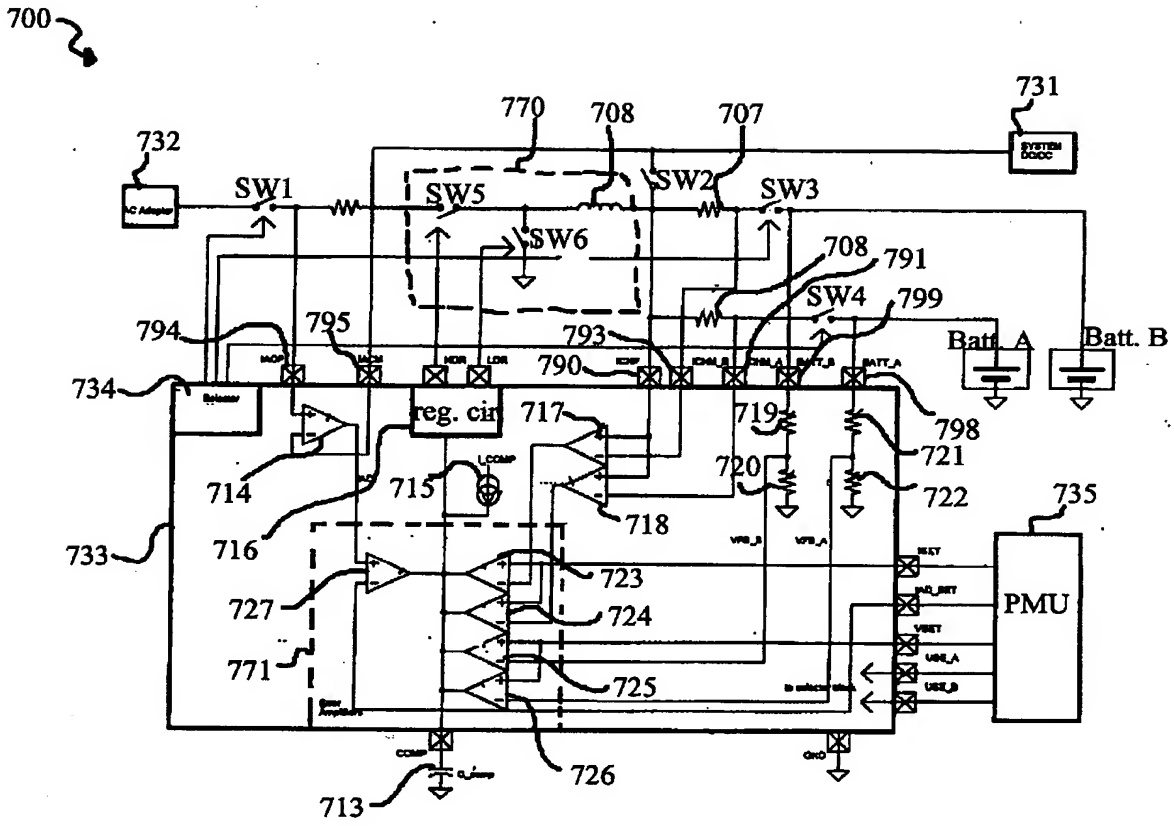

700
731
770
708
707
732
SW1
SW5
SW2
SW3
SW6
708
791
SW4
799
794
795
793
Batt. A
Batt. B
790
734
reg. cir
717
719
798
721
714
715
720
722
735
718
733
716
723
PMU
727
724
771
725
726
713

FIG. 7

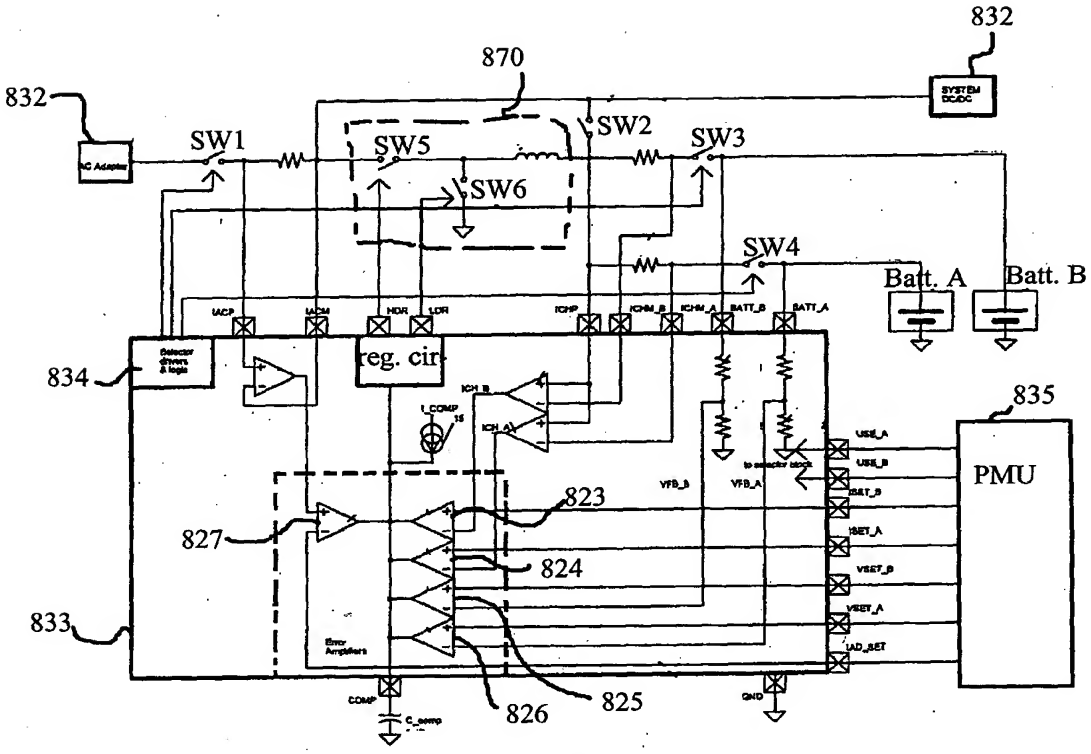

832
870
832
SW1
SW5
SW2
SW3
SW6
SW4
Batt. A
Batt. B
reg. cir
834
835
PMU
823
827
824
833
826
825

FIG. 8

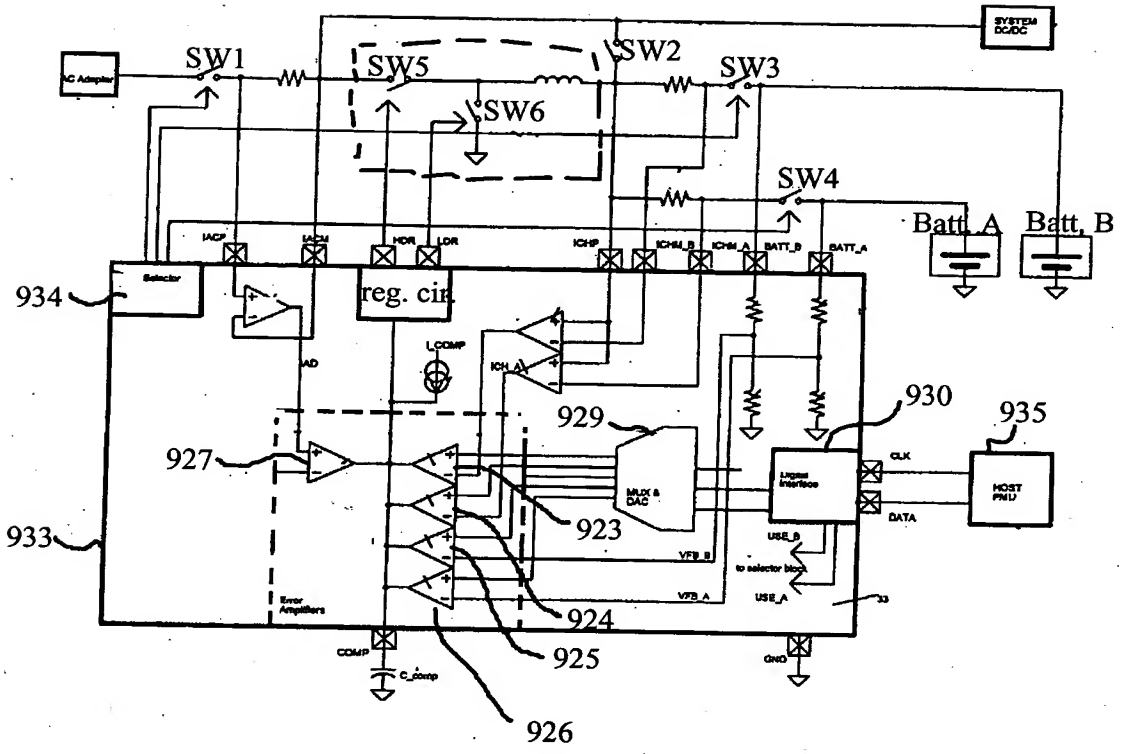

SW1
SW5
SW2
SW3
SW6
SW4
Batt. A
Batt. B
934
reg. cir.
930
935
927
929
923
933
924
925
926

FIG. 9